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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/021,088	12/19/2001	Mitsugu Kamizuru	35.C16071	8751

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EXAMINER

TAWFIK, SAMEH

ART UNIT PAPER NUMBER

3721

DATE MAILED: 05/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/021,088

Applicant(s)

KAMIZURU ET AL.

Examiner

Sameh H. Tawfik

Art Unit

3721

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 March 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 and 7-20 is/are pending in the application.
- 4a) Of the above claim(s) 11 and 13-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 7-10 and 12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
 If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
 * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
 a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

Applicant's election with traverse of invention I (claims 1-4, 7-10, and 12) in the reply filed on 03/28/2005 is acknowledged. The traversal is on the ground(s) that the examiner has already conducted prior art searches with respect to both groups I and group II had been examined and there will be no burden for the examiner to consider both groups. This is not found persuasive because applicants filed RCE on 01/24/2005, which means that the examiner needs to consider and deal with the claims as new claims and needs to further expand the search if needed. In this case if applicants elected invention II, the examiner would need to expand the search, therefore, a burden would be loaded on the examiner.

The requirement is still deemed proper and is therefore made FINAL.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4, and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Kitai (4,781,667).

Kitai discloses a sheet folding apparatus for folding a sheet by nipping the sheet taking a predetermined position in a convey direction as a fold and conveying the sheet by means of a pair of folding rollers (Fig. 1), wherein at least a pair of folding rollers (Figs. 1; via rollers 82) has a single larger diameter portion (Fig. 1, via 82); provided within a convey range in a sheet

Art Unit: 3721

width direction of a minimum size sheet foldable in the sheet folding apparatus and small diameter portions at both sides of the large diameter portion (Figs. 1 and 4, via portion 81), and wherein a gap formed at the small-diameter portions between the pair of folding rollers is smaller than or equal to a thickness of the sheet as folded, see for example (Figs. 1, 3, and 4).

Regarding claim 2: wherein the large diameter portion is provided at a sheet convey center portion of the roller (Fig. 1; via 81).

Regarding claim 3: wherein a width of the single large diameter portion in the axis direction is substantially $\frac{1}{2}$ of a minimum width of a sheet size folded in the sheet folding apparatus (Fig. 4).

Regarding claim 4: wherein another single large diameter portion of the roller is provided outside a width of a maximum size sheet foldable in the folding apparatus (Fig. 4; via the large diameter between portion 81).

Regarding claim 9: wherein the single large diameter portion has a taper section (Figs. 1 and 4).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 7, 8, 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kitai (4,781,667) in view of Branecky et al. (5,180,151).

Art Unit: 3721

Click does not disclose that the predetermined gap formed between the pair of folding rollers is set smaller than a thickness of three sheets conveyed. However, Branecky discloses a similar sheet folding apparatus comprising that the predetermined gap formed between the pair of folding rollers is set smaller than a thickness of three sheets conveyed (Figs. 2 and 3; column 1, lines 19-26).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified Click's sheet folding apparatus by having the predetermined gap formed between the pair of folding rollers is set smaller than a thickness of three layers or sheets conveyed, as suggested by Branecky, in order to be able of folding more than one layer of sheet and increase the thickness of the sheet and strengthen the sheet by having more layers.

Regarding claim 10: Click discloses that the single large diameter portion has a taper section (Figs. 1 and 4).

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kitai (4,781,667).

Kitai does not disclose that the pair of folding rollers comprises elastic members. However, the examiner takes an official notice that such elastic folding rollers is old, well known, and available in the art. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have substituted Kitai's folding rollers with elastic folding rollers, for example rollers made of plastic materials, in order to soft with touching and folding the sheets and avoid any trimming or scratching the sheets.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sameh H. Tawfik whose telephone number is 571-272-4470.

The examiner can normally be reached on Tuesday - Friday from 8:00 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rinaldi Rada can be reached on 571-272-4467. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Sameh H. Tawfik
Patent Examiner
Art Unit 3721



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